

# Support for Redistribution and the Paradox of Immigration

Brian Burgoon  
University of Amsterdam

Ferry Koster  
Erasmus University Rotterdam

Marcel van Egmond  
University of Amsterdam

## Abstract

This paper argues that immigration has competing implications for attitudes about government redistribution depending on the level at which immigration is experienced. Working in occupations with higher shares of foreign-born employees can raise individual economic insecurities in ways that might overwhelm the way high foreign-born shares of the population might reduce solidarity or increase fiscal burdens. Hence, experiencing more immigration in one's occupation might more positively affect support for government redistribution than does experiencing more national-level immigration. We test this and other expectations on survey data in 17 European polities, focused on occupational and national measures of immigration. While national-level exposure to foreign-born populations tends to have little effect on support for government redistribution, occupational-level exposure to immigration tends to spur such support. These results suggest that immigration directly influences the politics of inequality, but in ways more complicated than recent scholarship suggests.

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Among the most salient issues in contemporary political life involves the consequences of immigration for the social and economic health of receiving countries. Such consequences include welfare states and income redistribution to address economic inequalities. Policymakers, media commentators, and scholars have all developed arguments about how and whether immigration affects social, economic and political relations in ways that could alter welfare and tax systems (Nannestad 2007). On the one hand, exposure to immigration in one's country and/or workplace might well undermine social capital or solidarity, or might increase the costs of re-distribution efforts, all in ways that might undermine general support for redistribution in industrialized economies (Freeman 1986; Luttmer 2001; Eger 2009). On the other hand, such exposure might actually increase substitutability of foreign for domestic labor that can increase subjective risks of income loss or unemployment, risks that might in turn increase rather than decrease support for redistribution as a way to indemnify risks (van Oorschot 2008; Finseraas 2009). The evidence marshaled to adjudicate these competing views has been sparse to date, focusing on how national immigration flows or stocks affect social policy spending – assuming more often than exploring the way immigration affects individual or public support for government policies to address redistribution (Senik et.al. 2009). The few exceptions, meanwhile, focus on national-aggregate measures of immigration, thereby smoothing-over the substantial variation within countries in how immigration can be expected to influence workers and citizens, and hence their support for social policy and redistribution (Mau and Burkhardt 2009; Finseraas 2009).

This paper explores how immigration affects social policy by directly investigating support for government redistribution as a function of immigration measured at both national and occupational levels. Immigration varies across, countries, communities within countries, and across occupations and sectors of employment. We expect immigration to have off-

setting effects for the politics of redistribution, and to have net effects that vary across levels at which immigration is experienced and measured. At any given level at which immigration is experienced, immigration may erode solidarity and social capital and thereby diminish support for income redistribution, while at the same time increasing individual economic insecurities that may nourish such support. We explain how these offsetting conditions can be expected to play out differently for different levels at which immigration is experienced and measured. For instance, variation in exposure to immigration at the level of occupations captures how immigration can spur individual economic risks but not so much how it affects broad social solidarity or fiscal solvency. But variation in exposure to national-level immigration might well capture the spatial and regional effects of immigration for solidarity and fiscal health while smoothing-over or being distant from individual economic insecurities. We thus expect immigration measured at the level of the occupation to have more net positive implications for support for redistribution than is the case for national-level measures of immigration.

We empirically test these alternative possibilities on European Social Survey (ESS) data on attitudes towards government redistribution of income in 17 European polities. We focus on two measures of exposure to immigration: individual-level exposure to immigration based on data on the share of foreign-born employees in a respondent's particular occupation; and a country's exposure to foreign-born residents. We find that individual-level exposure to immigration tends to spur support for redistribution, more strongly than any marginal negative effects of national-level exposure to immigration. These results suggest that immigration is relevant to the politics of inequality, but in ways that are more uneven and complicated than we are often led to believe.

## 1. Literature and Argument

Immigration always involves people from abroad settling in one's country to live and work. Such immigration varies, and is experienced, across countries and communities, and across occupations and sectors of employment. Whatever the level at which immigration is measured or experienced, intuition and existing research provide reasons to expect immigration in some ways to increase and in other ways to decrease support for redistribution.

Perhaps the most common view is that immigration will tend to be bad news for support for government redistribution, due to plausible economic and social consequences of immigration. The economic consequences are mainly fiscal in nature. Immigrants into European countries tend to be less educated and to perform on standardized tests more poorly than the native population into which they move (OECD 2008; OECD 2009a). They tend to find employment, further, in sectors in which unemployment waves with cyclical downturns have been hardest hit (OECD 2009a). Partly because of these characteristics, foreign-born residents have significantly lower employment rates and higher unemployment rates than their native counterparts, though in some countries this pattern is reversed. In late 2008 most European countries for which comparable data is available have seen foreign-born unemployment rates that are much higher (9.1 percent) than for the native population (5.7) (OECD 2009a, p.72). The spread is highest in the Netherlands and Norway (where foreign-born residents are one and a half times more likely to be unemployed than their native counterparts) and smallest in Poland (where native unemployment is ten percent higher than for foreign-born residents).

These socioeconomic characteristics lead quite predictably to higher dependence on many social policy programs and relatively low contributions to the revenue base, such that immigrants are often seen as net fiscal burdens (Gilens 1995; Gilens 1996; Luttmer 2001). Immigrants tend to rely less on contributory transfers and services, such as pension and

unemployment programs financed through payroll taxes. However, given that immigrants tend to have more children, and to have higher unemployment rates and longer unemployment spells, they tend to rely more than do natives on non-contributory government services and welfare programs – such as social assistance, housing benefits, and public schooling. According to one recent estimate pooling the experiences of nine EU countries, migrants are 20 percent more likely to rely on such non-contributory benefits (Boeri 2009, p.14). As for net tax contributions, migrants tend to pay substantially lower share of total revenue than their native counterparts. Boeri (2009) calculates that in nine countries surveyed migrants pay on average only 57 percent of the level proportional to their share of the population – that number being most downward skewed in Nordic countries (30 percent in Finland and Norway) and least in Spain (where immigrants pay slightly more than their share of total revenue (p.13). What this all means for net fiscal burden or contribution is difficult to judge, given the offsetting reliance on contributory and non-contributory programs. Studies have varied substantially in their estimates of such net contributions, though for European countries the majority have found a modest net burden, particularly recently, though mostly less than 1 percent of average national GDP (c.f. Rowthorn 2008; Fehr et.al. 2004).

In any event, the end result for opinion is that pluralities of European polities surveyed consider immigrants to contribute less in taxes than they receive in social benefits (47.3 %) and that they are bad for the economy as a whole (38.6%). Hanson et.al (2005) find evidence that such sentiments are related: that the higher costs of immigration in settings where redistributive policies are burdened by immigrants yield lower support for immigration in such settings, compared to those with less generous such policies.

The reality or belief that immigrants pose a net fiscal burden, particularly with respect to skewed dependence on non-contributory social-policy benefits, may stoke concern about the economy and about the economic sustainability of government redistribution in particular.

Hence, more immigration might well tend to lower support for government redistribution, all other things equal, out of concern for the latter's higher net cost or risk under high-immigration conditions.

Separate from such fiscal calculations, immigration might also lower support for government redistribution due to more social implications. There are good reasons to hypothesize, and some empirical evidence, that polities experiencing more immigration tend to experience feelings of difference and interact less with one another, even among their own ethnic or regional group. Such motivate the expectations and findings of some that immigration, particularly that which might constitute ethnic heterogeneity, may lower feelings of solidarity, trust and levels of social capital. This is now a matter of fierce theoretical and empirical debate (c.f. Banting et.al. 2006; Putnam 2007; Hooghe et.al. 2008). But the possibility that immigration is bad news for solidarity is real. If so, immigration could spell problems for support for government redistribution, since trust and solidarity are significantly positively related to support for redistribution and social policy (van Oorschot and Uunk 2007; Alesina and Glaeser 2004).

In any event, there is also evidence that native groups in Europe tend to see immigrants as less deserving of social benefits and protections than are other groups, such as the elderly, disabled, or the unemployed (van Oorschot 2006; van Oorschot and Uunk 2007). Such attitudes imply that increasing immigration could underscore a proportionate rise in the "undeserving," plausibly sapping support for redistribution – particularly should this be combined with disproportionate reliance on social policy as appears common.

Whatever the particular logic, a number of empirical studies suggest a broadly negative link. Soroka et.al. (2006) find aggregate evidence that higher proportions of foreign-born in the population tend to decrease growth in social policy spending. Alesina and Glaeser (2004) find that ethnic heterogeneity tends to correlate negatively with support for

redistribution. And more directly relevant to our concerns, Mau and Burkhardt (2009) find that European countries with higher foreign-born proportions, and particularly higher non-western foreign-born proportions, tend to be less supportive of government redistribution. Finally, other studies considering possible interactions between immigration and host-country attitudes or social policy conditions also paint broadly negative portraits of the social-policy implications of immigration for redistribution (Senik et.al. 2008; Finseraas 2009). Such evidence, combined with the fiscal and social reasoning above, support a first hypothesis, coinciding with what has been called the ‘efficiency hypothesis’ in literature on globalization and the welfare state (Garrett and Mitchell 2001):

Hypothesis One (Efficiency Hypothesis):

*Higher levels of immigration into a country or a particular occupation within a country ought to increase fiscal costs of redistribution and/or diminish social trust and solidarity in a polity, thereby decreasing support for government redistribution.*

There are, however, well established reasons in the literature on international political economy to expect the opposite effect – where immigration spurs rather than constrains support for solidarity and government redistribution (De Beer and Koster 2009; Finseraas 2009). These reasons have to do with the well-studied distributional economic consequences of immigration. The Stolper-Samuelson or specific-factor Ricardo-Viner models focused on factor or sector profiles underlying international economic movements expect factor-price equalization to result from migration as well as from goods and capital. It doesn’t matter to factor-price equalization if we are talking about trade that moves jobs to people, or about immigration that moves people to jobs. Both should yield factor-price equalization, including convergence of wages and working conditions between the labor markets sending and receiving migrants. In OECD countries where the scarce factor tends to be un and semi-skilled workers and the abundant factors skilled workers and capital, the expected consequences of higher immigration should be up-skilling. Such implies higher labor supply

of un- and semi-skilled workers and hence lower wages and working conditions, and higher risks of unemployment and income loss among these groups. This implies stronger interest in and support for redistribution to indemnify against such risks for un and semi-skilled workers – but less for skilled workers and capital owners. Such effects, however, are likely to be moderated by the degree to which immigration takes place among countries with similar factor profiles and to the extent that effects on consumer-product prices are skewed to benefit lower income workers (Baker 2007).

Separate from such effects for levels of labor supply and demand, however, is how immigration, like other faces of globalization, tends to increase elasticity of labor supply and demand – regardless of the relative factor-profiles of sending and receiving countries. And the effects are thus likely to involve increased income and employment insecurities regardless of skill level of the workers in the immigration-receiving countries. These conditions suggest that immigration, like other faces of globalization, might increase insecurities that spur support for government interventions.

In fact, there are reasons to expect immigration to have sharper such effects for support for government redistribution than do other faces of globalization. First and most modestly is that immigration likely affects a broader swath of occupations and sectors than do trade and investment – at least in the short and medium term. Migrants move to jobs in both tradable as well as non-tradable sectors. And their effects for the level and elasticity of labor demand is thereby potentially faster to spread than applies to those faces of globalization whose workings move primarily through tradables. Related to this is that the physical presence of migrants in work places likely leads to stronger, more palpable presence of globalization pressures. This might increase the salience and perception of incumbent workers of the globalization pressures.

Second, as already alluded to above, the migration applying to European countries tends to be of a lower skill profile than the native workers for whom they are substitutes. This is captured, among other ways, by how native populations in European countries have higher overall education on average (lower share of primary and higher percentage of secondary and somewhat higher tertiary education) than applies to their foreign-born populations – more so than in non-European OECD countries (see, e.g., Table 3.1, OECD, 2008, pp. 82-83). For instance, the proportion of the working-age foreign-born population with less than upper secondary education averages 35 percent for the EU-25, almost ten percentage points higher than the 25 percent for the native population (OECD 2009, p.128). Such a skew, moreover, has gotten worse in recent years (Boeri 2009, Table 6, p.18). These conditions suggest more problems for less-skilled workers, due to the factor price equalization such skewed immigration can unleash. Such skew shows up in studies comparing immigration and trade effects on wages, where the effects of migration on up-skilling and on less-skilled wages to be stronger for migration than for trade (Borjas *et al.*, 1991, 1996; Okkerse, 2008).

Third, foreign-born workers diminish the capacity to bargain to dampen factor-price equalization. This goes beyond the substitutability of foreign for native workers, or the lower income or longer work-day backgrounds of immigrants. It includes also the possibility that foreign-born employees tend to be harder to organize and easier to pressure for employers than are native workers on the whole. Foreign-born workers tend to be less familiar with regulations and rights, to be in more nonstandard working contracts, to get paid less and come from groups with higher unemployment. And they themselves or their families often have precarious legal positions that may make them somewhat more docile in their dealings with employers. To be sure, we have only modest empirical work on this matter, but there are many anecdotal examples and some research to support this expectation (Newman and Lennon 1995; Camarota 1998). These conditions lead to a situation where workers put at

greater risk by immigration might be handicapped in their attempts to address such risks in workplace bargaining on wages and working conditions. And this likely makes workers turn more readily to the government to provide some external support for income and employment risks – hence greater support for government policies entailing redistribution.

These considerations motivate the following, second hypothesis, coinciding with what in the globalization literature has been referred to as the ‘compensation hypothesis’ (Rodrik, 1998):

Hypothesis Two (Compensation Hypothesis):

*Higher levels of immigration into a country or a particular occupation within a country ought to increase economic risks of workers, increasing support for government redistribution to address such risks.*

Both of these competing Hypotheses may obtain for any given level at which immigration is experienced – at the workplace, the city or region, or the nation. The Compensation Hypothesis expects economic risks of immigration to spur subjective risks and support for public indemnification from such risks, such that countries that have more immigration as well as occupations within countries that have more immigration ought to have residents more supportive of redistribution. And the Efficiency Hypothesis expects fiscal costs and sapped solidarity in ways that in occupations as well as countries with more immigration ought to have people less supportive of redistribution. The implicit null hypothesis, of course, is that the pressures highlighted by the Compensation and Efficiency Hypotheses negate one another such that higher foreign born tends to have no significant net effect on support for redistribution. At stake for all these hypotheses, in any event, is whether the implications for individual economic risk dominate or are dominated by the implications for solidarity and fiscal burden. For now, we treat this as an empirical rather than theoretical question, at whatever level immigration is measured and experienced.

We do, however, expect that the intervening conditions the competing hypotheses implicate are more or less relevant for a given level at which immigration is experienced. The Compensation Hypothesis (Hypothesis Two) emphasizes how immigration might influence individual economic risks associated with exposure to the competition from immigrants in the workplace. It stands thus to reason that differences in immigration shares across such workplaces within countries will most directly capture the effects underlying that hypothesis: Even within a country with cross-nationally modest immigration will have variation in foreign-born shares of employment in different occupations or sectors, where possible increased economic insecurities of workers might show up. National-level variation in immigration will do so less, we suspect, because it will tend to smooth over the individual economic effects or in any event be distant from the economic experiences relevant to such insecurities. On the other hand, the possibilities that immigration poses fiscal burdens or diminishes social solidarity are not as likely to be stronger in those occupations with higher foreign-born shares than is true of similar variation across regional or fiscal entities like nation states where fiscal and solidarity conditions are more palpable and politically relevant.

Hence, variation in immigration across occupation-years ought to make Compensation Hypothesis (Two) hold more than does the Efficiency Hypothesis (One), while at the level of the nation the pattern ought to be the opposite (the Efficiency Hypothesis holding more than does the Compensation Hypothesis). The observable implication is quite simple: Higher levels of immigration into a particular occupation ought to increase economic insecurities more, and affect fiscal costs of redistribution and/or diminish social trust and solidarity less, than do higher levels of immigration into a country. Hence our final, synthesizing hypothesis:

Hypothesis Three:

*Higher-immigration **occupations** compared to low-immigration occupations should increase support for government redistribution more, or decrease it less, than holds when comparing low- and high-immigration **countries**.*

## 2. Survey Evidence in Europe

We test these expectations on a cross-sectional dataset of individual attitudes in Europe, combining the four waves of the European Social Survey (ESS) with fine-grained occupational-level data on immigration from the OECD (ESS 2004, 2006, 2008; OECD 2009c). The subset of the resulting dataset comprises countries from between one and four waves of the ESS (in 2002, 2004, 2006 and 2008) for Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, United Kingdom. This dataset is particularly suitable to test the arguments above, because it harbors substantial national and individual variation in support for government redistribution over at least a modest time period, and provides the broadest cross section of countries and individual-economic information to study in detail the consequences of international migration.

### 2.1. Variables

We seek to explain public support for government redistribution of income, something that the ESS data, in all waves, directly surveys. Respondents were asked whether they agreed or disagreed with the following statement: “Government should reduce differences in income” (ESS 4-2008 Appendix A3, Q.B30, p.26). We recoded the answers to scale from 1-5 (1=strongly disagree; 2 somewhat disagree; 3=somewhat agree; 4=somewhat agree; 5=strongly agree).<sup>1</sup> How such redistribution ought to be accomplished is left unstated. Government redistribution in practice occurs via some combination of more or less progressive taxation, including negative income taxes, and the provision of various aspects of the welfare state, including some mix of income transfers or social services. We interpret the question to be addressing the broad principle of redistribution, involving either

no practical considerations or considerations of some combination of the specific tax or spend provisions.

The grand mean for *Support redistribution* for all four waves is 3.82 (standard deviation 1.04), suggesting a significant majority of Europeans supporting government redistribution of income.<sup>2</sup> But such support substantially varies over time and across countries, as is clear from Figure One. This Figure shows the percentage of national sample populations to support or strongly support redistribution (with *Support redistribution* scores of 4 or 5) in 2002 and 2008. Here, national means range from a low of .41 in Denmark in 2008 to a high of .92 in Greece in the same year. Such a distribution is a reminder that that respondent support for government redistribution is likely influenced, at least in part, by existing levels of inequality and/or actual redistribution. The over-time developments captured in these data suggest also significant changes in support for redistribution, averaging out as a very modest decline (an average decline of two percentage-points), but significant differences across countries – for instance, where Norway experienced a drop in support of ten percentage points, and Austria an increase in four percentage points.<sup>3</sup>

[Figure Two here]

Our principal explanatory variables are measures of exposure to international immigration. We focus on two measures, in line with the arguments surveyed above. The first is a fine-grained measure of a respondent's exposure to immigration in his or her occupation. This is based on a respondent's ESS-coded occupation, based on main job and qualification, coded at the four-digit level from the ISCO-88 classification. For 17 of the sample countries, OECD International Migration Database supplies cross-nationally comparable information on the number of foreign-born and native employees for each

occupation, at the three-digit level of ISCO-88 classification (OECD 2009c). This is the most fine-grained information on such immigration exposure of which we are aware – much more so, for instance, than the OECD’s or EU’s sector-based information. This measure allows us to concord the OECD immigration and ESS occupation data on a one-to-one basis for each respondent, to measure the foreign-born proportion of total employment in each respondent’s occupation (yielding more than 200 different occupational categories per country). This measure, *Foreign-born in occupation*, allows judgment of how work-place related exposure to immigration affects support for government redistribution. Unfortunately, the data on foreign-born from particular regions or countries of birth is much sparser – unavailable for enough country-occupations to offer substantial within-country variation. The sample distribution for basic *foreign born in occupation*, in any event, averages .087 (that is, nine percent) and is highly dispersed (s.d. .096), ranging from 0 for public administrators in Poland to 1.0 (that is, 100 percent) for a few respondents employed as ship’s hands and helpers in Luxembourg.

The second measure we consider is each nation’s *foreign born in country*, as a percentage of the population, based on data from the OECD (OECD 2009). We considered and report results corresponding to each wave of the survey but lagged by one year. This measure is preferable to alternatives such as asylum seekers, immigration flows, non-citizens, or net migration, because it allows us to directly compare the national-level results with those by occupation, and because it has better country coverage and is less sensitive to nationally-varying differences in measurement than other measures.<sup>4</sup> This measure is, of course, much more aggregated than *foreign-born in occupation*. But it captures levels of migration an entire socio-economy and polity faces, an aspect of immigration focused on mix of residents as opposed to employed workers, hence capturing plausibly different social and distributional consequences to someone’s exposure to foreign-born workers via occupation. This is

particularly true to the extent that many foreign-born in a country do not work or are concentrated in particular occupations or sectors. In any event, the two measures are strongly positively correlated, as can be seen by taking the country averages of *foreign born in occupation* and setting this against *foreign born in nation*. Figure Two provides this snapshot, revealing the strong positive correlation (R-square=.95), even if the outlier of Luxembourg is excluded from the comparison (R-square=.89).

[Figure Two here]

As controls we include a range of individual and (for some models) national parameters that plausibly influence both support for government redistribution and *ex ante* shares of foreign born in the population and economy. Most of these controls vary at the level of the individual respondent. *Age* in number of years can be expected to affect economic interests in and values toward government redistribution and work orientation. *Female* gender captures occupational selection and has long been found to spur support for social policy interventions and redistribution (Orloff 2009; Rehm 2009). *Education* affects occupational selection and conditions whether respondents are likely to be net beneficiaries or benefactors of redistribution. *Household income* has direct implications for work choices and for redistribution, and as a possible consequence of immigration patterns will tend to lead us to understate implications of the latter for attitudes on redistribution. *Foreign born* address interests in redistribution and controls for possible composition effects of respondents (where respondents are themselves foreign born rather than reflecting the economic consequences of being in occupations or nations exposed to higher foreign-born shares). *Married* respondents have income sources and responsibilities that affect work choices and social policy attitudes.

*Union member* captures organizational interest that affects redistributive attitudes. And we include a dummy for whether respondents are currently full-time *employed*.

In addition to these individual-level controls, we also consider occupation-level controls to address the possibility that occupation-level variation in foreign-born employees might be a function of background occupational characteristics. For instance, foreign-born employees may tend to cluster in less protected occupations with high rates of non-standard contracts that themselves foster support for redistribution.<sup>1</sup> To address such possibilities we include two control variables that can be constructed from Eurostat *Labour Force Survey* data on proportion of *temporary workers in occupation* and proportion of *part-time workers in occupation*, respectively, which can be constructed at the one-digit level of ISCO-88 occupational categories for all 17 sample countries and 4 survey years (Eurostat 2011a, 2011b). More importantly, we also consider dummies for all ten ISCO-88 occupations, capturing the effects of any other unobserved features of occupation that might obscure the influence of occupation-level exposure to immigration.

Finally, for those estimations of the effects of aggregate *foreign born in nation* we also consider the role of two national-level controls. *Ex ante Social spending* (as % GDP) helps control for the possibility of diminishing marginal returns to redistribution. And similarly, we consider the effects of *ex ante* inequality, measured using pre-tax and transfer *Inequality* via *Gini*-index scores.

## 2.2. Estimation strategy

We fit two sets of models to consider the three hypotheses. The first focuses on the effects of foreign born in occupation, taking full advantage of the substantial within-country variation. These allow us to include country dummies to capture many otherwise unmeasured

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<sup>1</sup> We thank a reviewer for drawing our attention to the importance and possibility of such occupation-level controls.

differences across national settings that might influence immigration patterns and attitudes towards redistribution. For these models, coefficients are estimated using ordered probit and the standard errors are robust-cluster ‘sandwich’, clustered by occupation to account for occupation-specific clustering of errors. The second estimator considers not only the within-country variation across occupations in foreign-born shares but also national-level foreign born shares in nation. Ignoring the multilevel nature of the data violates the assumption of independent errors and can lead to underestimation of the standard errors associated with contextual variables (Steenbergen and Jones 2002). To address such problems, we fit random-intercept-random-coefficient models, grouped by nation and with nationally-varying and occupation-varying coefficients for the individual-level measure of exposure to immigration. For both sets of estimations, we consider three specifications: one for the 2002 wave of the ESS data (most closely matching the occupation-level immigration data); one for the (most recent) 2008 wave; and one pooling all four waves (2002, 2004, 2006, and 2008). In addition to these models, we considered and discuss below a range of sensitivity and robustness tests, as well as tests of possible mechanisms linking immigration to position-taking on redistribution.

### 3. Results and Discussion

Table One summarizes the main results. The first three models focus only on the effects of *foreign-born in occupation*, in three specifications of ordered probit estimation with country dummies. The controls perform broadly in line with expectation. Hence, respondents who are older, female, foreign-born, and union-members tend to be more supportive of government redistribution than their counterparts. And those working in occupations with high proportions of part-time workers and of temporary workers tend also to be more

supportive, particularly in models taking account of all four survey waves. And more educated, wealthier, married, and employed respondents tend to be less supportive of redistribution. Year, country and occupational dummies are very highly jointly significant (results not shown).

[Table One here]

The main results involve how respondents in occupations with higher shares foreign-born workers tend to be more supportive of government redistribution, net of the above controls. This effect is stable in substantive size across waves of the survey: weakest in the 2002 wave of the survey; strongest in the most recent 2008 survey. In substantive terms, however, the spurring effect remains modest whatever the specification. This can be best seen by counterfactual estimation, such as that summarized in Figure Three. There we show the predicted probabilities of strongly or somewhat supporting government redistribution, based on model 1, as one moves through the sample distribution of *foreign born in occupation* but holding other parameters at their means or medians. The full range in *foreign born in occupation* predicts a rise from .8 to .87 in the probability of supporting government redistribution. More concretely, we can compare the effects of moving from the 50<sup>th</sup> to the 99<sup>th</sup> percentile in the sample distribution of immigration in one's occupation. The 50<sup>th</sup> percentile is a foreign-born share of occupational employment of .05, roughly equivalent to Austrian secretaries and key-board operating clerks. Respondents exposed to this level of immigration are predicted by the model to have a 81 percent chance of supporting government redistribution. Moving to high exposure at the 99<sup>th</sup>-percentile (.047 or 47 percent of occupational employment) – the equivalent of Swiss office and hotel cleaners – should yield a 84 percent chance of somewhat or strongly supporting redistribution. This is modest,

of course. But given the significant majorities across countries and time who support redistribution, the distribution explained by *foreign-born in occupation* is meaningful.

[Figure Three here]

Models 4-6 in Table One summarize how the effects of *foreign-born in occupation* compare to those for *foreign-born in nation*. These are random-intercept and random-coefficient ordered probit models, grouped by country. The results for *foreign-born in occupation* are similar in terms of substantive size to those for the ordered-probit models with country dummies. Again, we see that increases in occupational exposure to immigrants statistically-significantly if modestly spurs support for government redistribution. At the same time, however, the *foreign born share in nation*, to which this occupational pattern is at least partly related, appears to have no significant effect: higher foreign-born shares of the total national population correlate negatively but not significantly with support for government redistribution. Since both *Foreign born in occupation* and *Foreign born in nation* are in the same units, the coefficients can be directly compared. In these data, hence, it is clear that *Foreign born in occupation* has a much larger positive effect, substantively, than is true for immigration experienced at the national level.

This paradoxical result for immigrants as workers in occupations, versus immigrants as residents in nations, may be odd. But it is broadly consistent with some of the expectations developed above. The evidence is consistent with the view that immigration at the level of the occupation spurs individual economic insecurities that make workers more likely at the margin to support some public indemnification of such risks – through government redistribution. This supports Hypothesis Two. Certainly within a country, those in higher-immigration occupations ought to be, all other things equal, more supportive of government

redistribution. At the same time, the evidence is also consistent with the view that foreign-born shares of a nation's population could affect the sentiments of the same workers in the opposite direction – affecting social attitudes or economic calculations in ways that dampen any spurring effects on support for redistribution. But such national-level patterns support neither Hypotheses One nor Two: those in countries with more immigration are neither less nor more likely to support redistribution than those in lower-immigration nations, all other things equal. Finally, these contrasting patterns between the occupational and the national levels of immigration, involving the same kind of measure (foreign-born workers or citizens), provide a strong version of support for Hypothesis Three.

Interestingly, the occupational and national levels do appear to operate distinctly from one another. This we have established by considering whether foreign-born as a proportion of national population interacts with foreign-born as a share of occupational employment. In all of the reported specifications, the interaction was statistically insignificant. Stated differently, at high or low levels of occupational exposure to immigration, rising national immigration tends to have no significant effect on support for redistribution. And at either high or low levels of national immigration, occupational exposure of immigration tends to spur support for redistribution (results not shown but available upon request). For instance, based on model 6 in Table One, we can estimate the effects of moving from low to high foreign born occupations, such as comparing attitudes of low-immigration secondary school teachers with those of high-immigration hotel workers. Within a country like Poland, which has the sample's lowest foreign-born as a share of the national population (1.6 percent), such an increase involves going from occupational exposure to .9 percent of foreign-born employees to 4.1 percent, and this predicts a modest increase in the chance of strongly supporting government redistribution: from 31.6 (95-percent confidence interval from 23.7 to 41.5 percent) to 34.3 (25.8 to 43.2 percent). And within a high-immigration country like

Luxembourg, the same shift in occupational immigration would involve moving from 3.4 percent to 72 percent foreign-born employees, predicting a slightly stronger increase in strongly supporting redistribution: 15.2 percent chance (from 7 to 25.2 percent) among the (relatively) low-immigration occupations, and 16.6 percent (from 7.2 to 24.7 percent) chance of strongly supporting redistribution. Hence, immigration experienced in one's occupations and in one's nation simply to play out differently with respect to support for redistribution.

This means that immigration has complicated implications for social policy and redistribution. For instance, working as a hotel worker in Luxembourg rather than as a public-school teacher in Poland involves exposure to immigration that may have contradictory implications for support for redistribution. On the one hand one will be more prone to economic risks and favorable to some compensatory redress by virtue of the occupational status, but the implications for solidarity and fiscal burdens might make one more skeptical about such redress. Since the effects of national-level immigration is so much more modest substantively than those of immigration experienced at the level of occupations, the net pattern constitutes more support for Hypothesis Two than for Hypothesis One. In the present data for the countries and years under investigation, occupation-level immigration tends to be more important and to have a more compensatory effect spurring support for redistribution than does national-level immigration.

These main results, particularly those for *Foreign born in occupation*, withstand a wide range of sensitivity and robustness tests. We get similar results should we consider particular groupings of countries, with (particularly the occupational-level) results being resistant to exclusion of particular countries (e.g. excluding Greece increases the positive effects of *foreign born in occupation*). Fluctuating controls or including a larger sample of countries (beyond those for which *Foreign born in occupation* can be measured) can alter the results for *Foreign born in nation* – making its effects more negative. The main results for

*foreign born in occupation*, however, are not sensitive to such varying mixes of controls or countries – including industry dummies, despite the high collinearity this presents. The same is true for estimations using alternative specifications of support for government redistribution or of foreign-born exposure, such as ratios of foreign to national employees. And constraining the results by excluding outliers in foreign-born shares, or by focusing on only native respondents, also yields very similar results to those reported in Table One. Interestingly, neither *foreign-born in nation* nor *foreign-born in occupation* appear to have significantly differential effects for support for redistribution depending on skills levels, gender or age; the reported direct effects prevail. Furthermore, alternative estimators (probits or logits of binary measures of support for government redistribution) or multinomial logit, or alternative estimations of standard errors, all yield results very similar to those in Table One. Finally, we have reproduced the basic results on ISSP data, which harbors less cross-national variation in many variables of interest and lacks the sampling quality of the ESS but does have similar measures of support for redistribution. The main analysis, hence, provides little support for Hypothesis One, partial support for Hypothesis Two, and strong support for Hypothesis Three.

It is in any event important to explore whether these results corroborate the causal logic underlying, as well as basic line of, the Hypotheses above. As supplements to the above analysis, we investigated how *foreign born in occupation* and *foreign born in nation* might influence a range of intervening attitudes that in turn influence support for government redistribution. The ESS data does not include all measures relevant to the logic of such intervening conditions articulated above; for instance, we have no measures there of general solidarity or trust in societies. But the various ESS waves, particularly the most recent 2008 wave, include questions on attitudes that constitute intervening links connecting occupation-

and national-level immigration to attitudes about redistribution. These provide leverage to better judge the Hypotheses above, particularly Hypothesis Three.

We first considered measures of these intervening sentiments in the ESS data, looking particularly for such measures that not only are plausible intervening links but that in the data appear to significantly increase or decrease support for redistribution. The 2008 wave of the survey includes a question about *subjective unemployment risk* (respondent assessment of ‘how likely [he or she] will be unemployed and looking for work in next 12 months’) and a question about *poverty risk* (‘how likely [he or she] will not have enough money for household necessities in the next 12 months’). Both attitudes about unemployment and about poverty risks strongly positively influence support for redistribution (not shown),<sup>2</sup> and are plausibly influenced by exposure to immigration. The ESS data also gauge subjective sense of how the national economy is doing; and a range of questions of whether immigration is good or bad for the nation. Neither of these is directly relevant to the intervening links discussed above, but both capture sentiments of national economic wellbeing and of effects of immigration that plausibly influence how immigration plays out for redistribution. Positive judgments of the state of the national economy strongly spur support for redistribution, and judgment that immigration is good for national culture also spurs such support (importantly, this is the only immigration question to have such an effect). Finally, ESS measures whether respondents judge social benefits to put an excessive strain on the economy – a condition that, not surprisingly, strongly negatively influences support for redistribution. We do not report these results, though they are available in Supplemental Appendix One.

Given that these are the attitudes in both theory and empirics to significantly influence support for government redistribution, we explore how and whether *foreign-born in occupation* and *foreign-born in nation* influence answers to these same questions. This will

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<sup>2</sup> The models, here, follow the specification of Model 3 in Table One, except that we substituted the intervening measure of interest for the immigration measures.

help identify the mechanisms underlying the Hypotheses. In line with Hypothesis Three, for instance, we expect particularly occupation-level immigration to spark individual-level economic insecurities, and to do so more strongly so than does national-level immigration. And we expect occupation-level immigration to spark *fewer* concerns about broad, national economic conditions, about the effects of immigrants generally, and about fiscal costs of redistribution – less than does national-level immigration.

Table Two below provides an explicit test of these expectations. Each row of the Table reports the expected and actual coefficients of the two measures of immigration in random-intercept random-coefficient models of the attitude in question, along with battery of controls included in estimations of support redistribution above (controls not reported but available upon request). The results provide mixed evidence for the causal dynamics underlying the Hypotheses. In the first two rows, we can see that *Foreign born in occupation* does tend to substantively and statistically significantly increase both subjective unemployment risk (model 1) and subjective poverty risk (model 2), while *Foreign-born in nation* tends to have little such effect. This is, for work-based measures of immigration, support for Hypothesis Two, and further and strong support for Hypothesis Three. Also consistent with Hypothesis One, but particularly Hypothesis Three, is that *Foreign-born in nation* much more strongly reduces satisfaction with how the economy is doing (model 3) and judgment that immigrants are good (model 5) than does *Foreign-born in occupation*. On the other hand, we also can see that neither *foreign born in nation* nor *foreign-born in occupation* significantly increase sentiment that social benefits put a strain on the economy – something we expected to be the case particularly for *foreign-born in nation*.

[Table Two here]

Other than this exception, the Table provides good reasons to see that the logic underlying both Hypotheses One and Two are at play, and that the net effect is strong enough for *foreign-born in occupation* to support the “compensation dynamic” of Hypothesis Two in the net. Clearly, we see significant support for the logic underlying Hypothesis Three – all patterns consistent also with the main results in Table One. Also consistent with the logic of Hypotheses Two and Three are that adding the survey parameters for *subjective unemployment risk* and *subjective poverty risk* to estimates of how *foreign born in occupation* influence support for redistribution tend to significantly diminish that influence.<sup>5</sup>

#### 4. Conclusion

This paper explores how immigration can have complicated implications for support for government redistribution in industrialized countries. Against the most common view in scholarship on political economy that immigration tends to be bad news for support for redistribution, we hypothesize and find evidence that occupational as opposed to national exposure to immigrants can have different, even opposite implications for such support. Immigration experienced in a worker’s occupation plausibly spurs mainly his or her individual economic insecurities in ways that increase support for government compensation for such risks. Immigration experienced in one’s nation, meanwhile, plausibly speaks more to citizens’ broader sense of social solidarity and calculations about the fiscal burdens of redistribution in ways that may decrease such support. We find modest support for such logic. But mainly we find evidence that occupational exposure to immigration spurs support for redistribution while national exposure does not, and that this difference involves how occupational exposure spurs individual unemployment and poverty risks while national exposure does not. Such national versus occupation results are important unto themselves, as

differences across working experiences in exposure to immigrants and in attitudes to redistribution are of significant interest to political economists, particularly when considering differences within a given polity.

Further research should deepen and extend the analysis. Once we understand the basic, mainly direct implications of immigration for redistribution attitudes we should explore the more complicated politics qualitative research and intuition support. For instance, we should consider interactions with various other attitudes about immigrants and about political economy. And we should consider how and whether broad public attitudes putatively shaped by immigration actually influence party and policymaking agendas and ultimate revenue and spending policies of states. In the meantime, this study reminds us that immigration has important but also diverse implications for social policy – posing risks threatening but also significant leverage to sustain social protection in industrialized polities.

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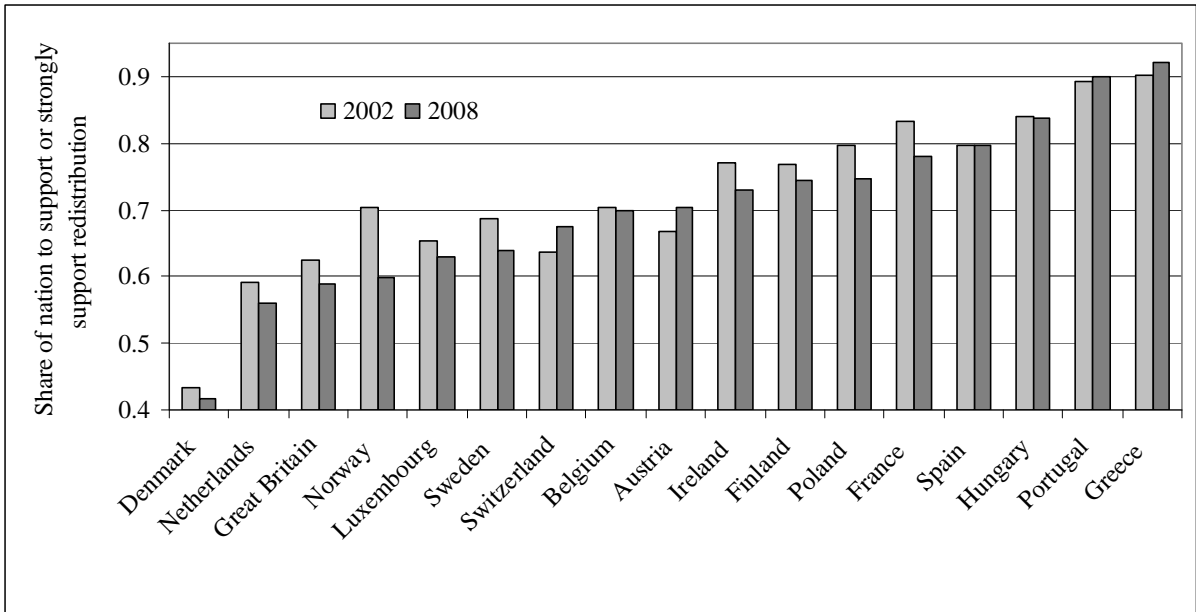
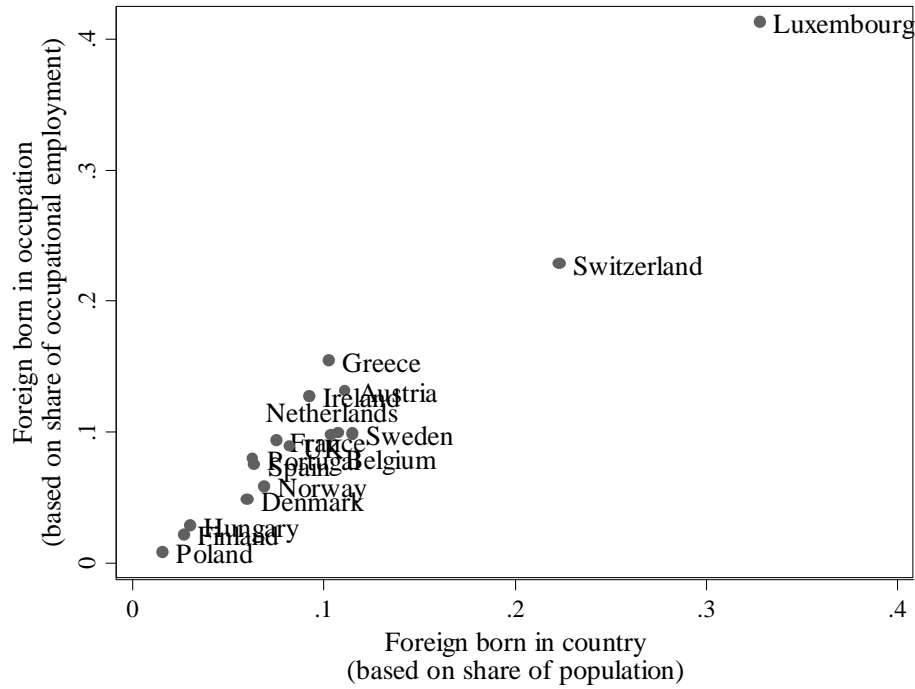


Figure One:  
Support for Government Redistribution, 2002 and 2008



Source: OECD, ESS, own calculations

Figure Two:  
Foreign born shares in Nation and in Occupation (national averages)

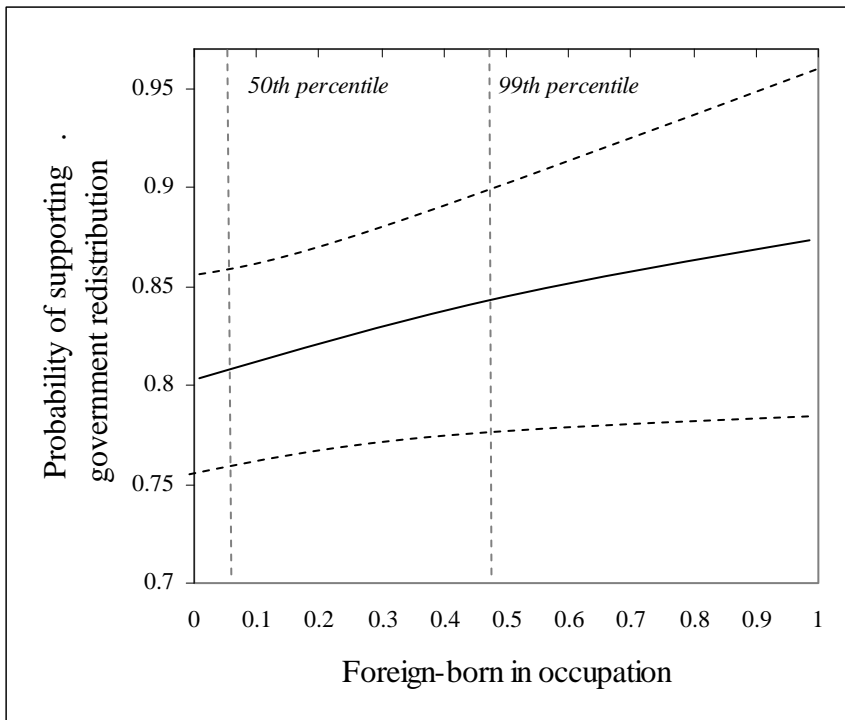


Figure Three:  
 Predicted Support for Government Redistribution as function of *Foreign born in Occupation*

Table One:  
Support for Government Redistribution

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Foreign-born in occupation</i>	0.265** (0.113)	0.315** (0.151)	0.241*** (0.087)	0.227* (0.137)	0.321* (0.175)	0.322*** (0.097)
<i>Foreign-born in nation</i>				-0.837 (0.735)	-0.218 (1.321)	0.348 (0.352)
<i>Age</i>	0.004*** (0.001)	0.005*** (0.000)	0.005*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.004*** (0.000)
<i>Female</i>	0.177*** (0.020)	0.120*** (0.018)	0.147*** (0.012)	0.154*** (0.013)	0.104*** (0.013)	0.136*** (0.007)
<i>Educated</i>	-0.121*** (0.025)	-0.160*** (0.022)	-0.144*** (0.014)	-0.178*** (0.017)	-0.181*** (0.016)	-0.158*** (0.009)
<i>Household income</i>	-0.218*** (0.018)	-0.257*** (0.017)	-0.252*** (0.010)	-0.211*** (0.014)	-0.242*** (0.015)	-0.231*** (0.007)
<i>Married</i>	-0.047*** (0.016)	-0.042*** (0.015)	-0.043*** (0.008)	-0.031** (0.013)	-0.036*** (0.013)	-0.037*** (0.007)
<i>Foreign born</i>	-0.007 (0.023)	0.000 (0.026)	-0.008 (0.013)	0.004 (0.018)	0.010 (0.018)	-0.002 (0.009)
<i>Union member</i>	0.168*** (0.021)	0.209*** (0.021)	0.174*** (0.011)	0.156*** (0.016)	0.195*** (0.017)	0.167*** (0.008)
<i>Employed</i>	-0.027 (0.021)	-0.056*** (0.021)	-0.037*** (0.011)	-0.025* (0.015)	-0.056*** (0.015)	-0.039*** (0.008)
<i>Temporary job in occupation</i>	0.148 (0.208)	-0.016 (0.223)	-0.012 (0.111)	0.744*** (0.211)	0.735*** (0.180)	0.416*** (0.136)
<i>Part-time in occupation</i>	0.156 (0.116)	-0.001 (0.121)	0.140** (0.067)	-0.010 (0.099)	0.038 (0.092)	0.176** (0.077)
<i>Inequality (Gini index)</i>				0.023 (0.014)	0.026 (0.022)	0.009** (0.004)
<i>Social expenditures (% GDP)</i>				-0.029** (0.014)	-0.008 (0.024)	-0.004 (0.004)
Country dummies	Yes	Yes	Yes	No	No	No
Year dummies	No	No	Yes	No	No	Yes
Occupational dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,544	24,285	96,818	24,544	24,285	92,189
Number of countries	16	15	17	16	15	17
Log likelihood	-30268.6	-30504.3	-122249.8	-33971.0	-33240.1	-127775.5
Pseudo-R-square	0.058	0.058	0.056			

Dependent variable all models: "Government should reduce differences in income", answers recoded to scale from 1-5 (1=strongly disagree; 2 somewhat disagree; 3=neither agree nor disagree; 4=somewhat agree; 5=strongly agree)

Models 1-3: Ordered probit coefficients with robust standard errors, clustered over occupations (in parentheses), with design weighting. Cuts and dummies for countries, occupations and years not shown.

Models 4-6: Random intercept-random-coefficient maximum likelihood estimation (individuals embedded within occupations, embedded within countries). Standard errors shown in parentheses. Implemented in Stata 10.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table Two:  
Effects of *Foreign born in occupation* and *Foreign born in nation*

<i>Dependent variable:</i>	<i>Foreign born in occupation</i>		<i>Foreign born in nation</i>	
	Expected	Actual	Expected	Actual
(1) Subjective unemployment risk	++ Strong positive	+0.871*** (0.220)	Ø+ Weaker positive	-0.437 (0.521)
(2) Subjective poverty risk	++ Strong positive	+0.556*** (0.184)	Ø+ Weaker positive	-0.307 (0.896)
(3) Satisfied with how economy is doing	Ø – Weak negative	-1.376*** (0.272)	-- Strong negative	-22.11*** (0.697)
(4) Social benefits are a strain on economy	Ø + Weak Positive	0.159 (0.146)	++ Strong positive	-0.252 (1.307)
(5) Immigrants are good for nation's culture	Ø – Weak negative	0.292 (0.352)	-- Strong negative	-6.244*** (0.758)

Dependent variables: Each row is a different dependent variable. Results shown for each row are for single models. Included in the regressions for each row, are results for foreign-born by occupation and nation, respectively. Also included, but not shown, are the controls: age, female, education, foreign-born respondent, union member, employed, married, temporary-work and part-time shares in occupation unemployment and social expenditure.

Random intercept-random-coefficient models, maximum likelihood estimation. Standard errors shown in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Appendix Table One:  
Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Support redistribution</i>	119877	3.816	1.036	1	5
<i>Foreign-born in occupation</i>	121724	0.087	0.096	0	1
<i>Foreign-born in nation</i>	124879	0.102	0.063	0.016	0.330
<i>Age</i>	121602	49.849	18.367	14	92
<i>Female</i>	122365	0.533	0.499	0	1
<i>Educated</i>	121808	0.240	0.427	0	1
<i>Household income</i>	117968	0.345	0.475	0	1
<i>Married</i>	130509	0.496	0.500	0	1
<i>Foreign born</i>	122395	0.149	0.356	0	1
<i>Union member</i>	122486	0.232	0.422	0	1
<i>Employed</i>	122486	0.532	0.499	0	1
<i>Temporary job in occupation</i>	105754	0.118	0.083	0.001	0.647
<i>Part-time in occupation</i>	107639	0.199	0.163	0.007	0.711
<i>Subjective unemployment risk</i>	23435	1.873	0.976	1	4
<i>Subjective poverty risk</i>	31438	2.105	0.936	1	4
<i>Inequality (Gini index)</i>	118953	29.056	3.821	22	38.1
<i>Social expenditures (% GDP)</i>	124879	25.326	4.070	14.858	32.214

Appendix Table Two:  
Intervening role of Employment and Income insecurity

	(1)	(2)	(3)	(4)
	Baseline	w/ Employment insecurity	w/ Income insecurity	w/ both Employment and income insecurity
<i>Foreign-born in occupation</i>	0.315** (0.151)	0.323 (0.198)	0.303* (0.160)	0.332 (0.206)
<i>Subjective unemployment risk</i>		0.050*** (0.010)		0.016 (0.011)
<i>Subjective poverty risk</i>			0.114*** (0.009)	0.102*** (0.011)

All models same as Model 3 in Table One, except the addition of parameters for subjective employment and income risks: Dependent variable is “Government should reduce differences in income”, answers recoded to scale from 1-5; and Ordered probit coefficients with robust standard errors, clustered over occupations (in parentheses), with design weighting. Results for all controls (same as in Table One), cuts and dummies for countries, occupations and years not shown.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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<sup>1</sup> “Don’t know or refused” were coded as missing (including less than 0.5 percent of the sample).

<sup>2</sup> Summary statistics for this and all other variables in the analysis is available in Appendix Table One.

<sup>3</sup> Measures of income redistribution, such as those from the Luxembourg Income Study, are available for only 11 sample countries. Such correlate significantly positively with the ESS-measured support for redistribution.

<sup>4</sup> The results are not appreciably different if one focuses on such measures (available upon request).

<sup>5</sup> Appendix Table Two summarizes how the significantly positive influence of occupation-based *foreign-born in occupation* diminishes with inclusion of the subjective unemployment and poverty risks. This is particularly so for employment insecurity, and is due more to the resulting increase in the standard error of *foreign-born in occupation* than to a resulting decrease in the coefficient.